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BULLETIN

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AN ORIGINAL GREAT SEAL OF ENGLAND

Through the generosity of Mrs. Ida Portia Bowman, her brother, Dr. Robert A. Bayley, and her sisters, Mrs. Ellery A. Johnson and Mrs. Charles D. Montague, there has been presented to the Pennsylvania Museum, as a memorial to George Willard Read Bayley, an original great seal of England, which was attached to a patent, as shown by the accompanying parchment, registered in the Patent Office on the 25th of June, 1860, by L. Edmonds, Clerk of the Patents. This patent on improvements on rails, rail supports and fastenings, and the nut fastenings of railroad bolts, was granted to William Edward Newton and assigned by him to George Willard Read Bayley, Mrs. Bowman's father, who was a distinguished American Civil Engineer, and whose patents they really were.

With the seal are the original patent and the assignment thereof by Mr. Newton to Mr. Bayley. An American patent of 1868, for a nut-locking railroad chair, also is in the collection which Mrs. Bowman has turned over to the Museum, with the drawings of the said improved nut.

Mr. Bayley was born at Saratoga Springs, N. Y., on November 30, 1821. He was a son of George Washington Bayley, of Newbury, Vt., and of Pattie Lucia Read, of Rutland, Vt. Both were descendants of earliest English settlers in New England. His childhood was spent on the present site of the Grand Union Hotel, Saratoga Springs, N. Y. He early showed unusual aptitude for mathematics and entered the Rensselaer Polytechnic Institute at Troy, N. Y., graduating in 1838 at the age of seventeen. His first employment was on the railway from Albany to Buffalo. His health failing, however, he was sent for a trip around the world, returning to America and civil engineering two years later. He worked in New York State until he became Assistant State Engineer of Louisiana, with his office at Bâton Rouge. His study here was the hydrography of the Mississippi River; he perfected difficult problems of hydrodynamic science and became a recognized expert in the physics of the Mississippi region. He was also elected Chief Engineer of the New Orleans & Opelousas Railroad, which office he held for fifteen years, accomplishing many difficult feats of railroading.

It was during this period of his life that one of his inventions for the improvement of rails, rail supports and fasteners, and the nut, met with enthusiastic acclaim in this country and in England. His inventions were patented under the great seal of England by William Edward Newton and



GREAT SEAL OF ENGLAND.
Queen Victoria. 1837 to 1901.

assigned to him the same year, 1860. He most likely would have made a fortune through at least one of these, had not the Civil War disturbed the business of the United States. His nut-locking chair, however, was patented in this country in 1864. Mr. Bayley lived on a fine country estate in Brashear City, now Morgan City. It was destroyed by a Federal Army during his absence in New

Orleans on government work, when he was closely associated with General Banks and "Ben" Butler.

About this time he was appointed City Engineer and City Surveyor in New Orleans. Later he returned to his former position of Chief Engineer of



GREAT SEAL OF ENGLAND.
Queen Victoria. 1837 to 1901.

the New Orleans & Opelousas Railroad until its purchase by Charles Morgan, when he was appointed Chief Engineer of the New Orleans & Chattanooga Railroad. The difficult construction of the railroad from New Orleans to Mobile, Ala., was thus entrusted to his skill. It so happened that the specifications of the contract for the grading of the track across the Atchafalaya

Basin were so drawn that to carry them out must entail loss on the contractor. Mr. Bayley was inflexible in exacting their fulfilment, and in the course of the difficulties that followed he felt justified, in 1873, to resign his post rather than be untrue to his principles.

He wrote the "History of Railroads in Louisiana," which was published in the *Picayune*; contributed an article on "The Mississippi" to Appleton's "Cyclopaedia;" another on "Levees" for Johnson's "Cyclopaedia" and for Barnard's "Cyclopaedia;" also one on the same subject for the American Society of Civil Engineers, of which he was a prominent member. He was a forcible writer for the New Orleans *Times* and the *Picayune*, thoroughly saturated with his subject, and his pen exercised a marked influence on the people of New Orleans and of Louisiana at large. An article on "Leveeing as a System for Reclaiming Low Lands," in 1875, obtained a wide hearing. He stood boldly for the jetty system, and his work before Congress in support of an open river mouth had much to do with securing the passage of the Jetty Bill—Fort St. Philip Canal, and the jetties for deepening the channel for the use of large vessels at the mouth of the Mississippi. After the passage of the bill he was urged by Capt. James B. Eads to accept the position of Chief Resident Engineer of the Jetties, with his office in New Orleans, ranking next to Captain Eads, a place which he held at the time of his death.

When in this country, Dom Pedro, Emperor of Brazil, with Captain Eads and Mr. Bayley, visited the jetties with a view to jettying the mouth of the Amazon. On the next day the Emperor called personally on Mr. Bayley and offered him the control of the work which he was planning, stating that he regarded him as the only civil engineer he had met who could carry out the undertaking.

The Museum already possesses, thanks to the industry and interest of Prof. Charles E. Dana, an interesting collection of casts of the great seals of England, made by the late Mr. Dana from the French archives which are housed in the superb palace of the Princes of Rohan-Soubise, in the Marais, one of the most interesting and once aristocratic parts of Paris. That collection contains 50,000 specimens. The great interest of ancient seals lies principally in the fact that they may be taken as fairly good representations of the monarch, more reliable than any other such of the time. Then, in early days, the seal was supposed to be endowed with magic power; without it the King could not govern. To counterfeit it meant to the culprit to be "hanged, drawn and quartered." In mediæval days, when the greatest monarchs could hardly sign their names, the seal was the universal way of authenticating documents. The Magna Charta was not signed by John, it was sealed. The earliest signed English document is by Richard II, murdered in 1400.

Originally the great seal of England was three inches in diameter. In time it increased in size, and the seal presented by Mrs. Bowman measures six inches. In the fourteenth and fifteenth centuries it became rich in design and expensive. Today it is rather weak and decadent, but still it has to be attached to all documents to which His Majesty as sovereign gives his assent.

The Penn Charter is the royal document most familiar to us in America. That invaluable document is in Harrisburg, but it lacks its seal, and by the

way, this reminds me that the disc which the sculptor appended to the Charter on the statue of William Penn on top of City Hall, according to the late Charles E. Dana, who looked up the matter, combines two serious errors. It resembles no seal ever used in England; and to cap the climax, it is stamped with the coat of arms of Queen Victoria, thus giving to this charter of 1681 a coat of arms absolutely unknown prior to 1837. A little knowledge of arenæology, I have several times discovered, is most valuable in art.

Our seal represents the Queen on her prancing horse, which is held by a page. The legend reads "Victoria Dei Gratia Britanniarum Regina Fidei Defensor." On the other side the Queen is seated on her high set throne, under a Gothic canopy, globe and scepter in hand; canopy between two female figures holding sword and book, said to be the cardinal virtues; at the foot is her coat of arms. These seals were cast in a silver mass $6\frac{1}{2}$ inches in diameter, and $11\frac{1}{4}$ inches in depth; it was in two parts and weighed one hundred and eighty-five ounces. Mr. Dana compared these matrices to huge waffle irons, which they do somewhat resemble. The whole subject is most interesting. The Museum until now possessed but two original seals, one of Germany and one of the early Pennsylvania seals, and this English seal is a valuable accession to the collection.

S. Y. S.



OLD LIMERICK LACE WEDDING VEIL

In addition to the seal presented by the heirs of George Willard Read Bayley, as explained above, the fine Limerick lace wedding veil of Mrs. Bayley, his wife, was also presented to the Pennsylvania Museum, as a memorial to her by her daughter, Mrs. Ida Portia Bowman, of Philadelphia, and by Mrs. Bowman's daughter, Mrs. John O. Taxis, also of this city. Mrs. Bowman was also married in this veil by the same minister who performed the wedding ceremony for her parents twenty-six years before.

Thus the two generations are represented by this memorial gift to the Museum.



A REMARKABLE PIECE OF CHINESE NEEDLEWORK

A picture of Field Marshal, the Right Honourable Viscount French, copied from a photograph by a needle artist of Central China, has been presented by Mr. John H. McFadden to the Pennsylvania Museum. It is a wonderful work of art. It has all the appearance of a painting in sepias, and when the writer first saw it she wondered why the gift of such a picture was made.